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HOMEMAKERS' CHAT

Thursday, November 10, 1938.

(FOR BROADCAST USE ONLY)

Subject: "THE KEROSENE STOVE." Information from the Office of Experiment Stations, U. S. Department of Agriculture, and the Bureau of Chemistry and Soils.

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Although it is said that more than 8 million farm families are still using kerosene or "coal oil" for cooking and lighting, very little research has been done on either the stoves or the lamps in which this inexpensive fuel is so widely used. One excellent study of kerosene stoves was made several years ago by Edna B. Snyder, of the Nebraska Agricultural Experiment Station. Its findings are just as good today. As some of you may not have seen the leaflet prepared by Miss Snyder, I'm going to give you a few points from it.

Miss Snyder groups all the kerosene cooking stoves into four main types. There are two kinds that use wicks- the long-chimney type, and the short-chimney type. Then there's a short-chimney type that is lighted by an asbestos ring or "kindler" instead of a wick. And the "wickless" type, which is the only one of the four that has to be primed with gasoline.

Each of these four types of kerosene stoves has its advantages and disadvantages from the housewife's standpoint. The long-chimney or so-called "blue flame" type heats up the quickest. This is a good point for those who have to get an early breakfast in a hurry. Incidentally, many housewives do not know that this type, because of its long chimney, can be used with about 1-1/2 inches of yellow flame when an intense heat is wanted, and the bottoms of the pans won't get sooted.

The chimneys are enamel and can be removed easily for washing. The long-chimney type uses slightly more oil than the other types, but not enough to make much difference in cost of operating. The investigators thought that pot roasts and steaks cooked more tender on the wick type stoves than on the other two types, also loaf cakes and roasts requiring slow ovens. Where a very hot oven was required, as in cooking cookies, muffins, and some pies, all types of burner were good. The long-chimney type seemed to have the least kerosene odor, either when first lighted, when burning at full heat, or after being turned off.

The short-chimney wick type is based on the principle of using an outer and an inner combustion chamber. So the chimney is a little hard to clean. This type takes a little longer than the long-chimney stoves to heat, but uses slightly less oil. Either type of stove having a wick is more easily adjusted for varying temperatures than the other two types. The short-chimney stoves formed soot in varying amounts about 60 percent of the time.

The lighting ring type of stove rated about the same as the short-chimney type for speed of heating, and used less kerosene. Temperature was harder to regulate, especially for oven cooking. By using only one burner, or placing

asbestos pads under utensils, the heat was successfully, but somewhat slowly adjusted. This type soots the utensils about as much as the short-chimney type with a wick.

The wickless burners are made of heavier materials and so are slowest to heat up. Although they use less kerosene than the other three types, they require gasoline for priming, so the fuel cost is about the same as for the long-chimney types. They soot up about 75 percent of the time. This is due, as in the case of the short-chimney types, to the fact that the flame comes very close to the utensil, and any outside factor, such as a draft, a drop of water, or contact with a cold utensil, may make it flare up.

Here's a point you might not think of checking. How quickly does a particular stove cool off when the oil is cut off? One of the advantages in using a kerosene stove is the fact that the kitchen is not heated up unnecessarily in summer; the faster the stove cools, then, the better. Tests showed that the burners which are slow to heat are slow to cool. The wick burners cooled most rapidly. Those with long chimneys cooled in slightly less time than those with short ones. The lighting ring type did not cool as quickly as the wick types. In these stoves, after the oil is shut off from the burner bowl, the flame continues to burn until all oil left in the bowl is used. The wickless burner, because of its heavy iron parts, holds heat the longest.

General points to note in selecting a kerosene stove are sturdy construction, the type of grate over the burners, and the draft spaces behind them. Open grates similar to those on a gas stove make for greater speed of the burner. If the draft spaces back of the burners on some stoves are enclosed, they can be used to keep foods warm, or for simmering.

The investigators comment on the waste of fuel if the cooking utensils are not suited in size to the size of the burner. Very small utensils used over giant burners are extremely wasteful of oil, as the amount consumed is high in proportion to the heat utilized. Utensils about twice the diameter of the burner are considered most efficient.

Kerosene is a comparatively safe fuel as it does not vaporize at ordinary temperatures- under 100 degrees Fahrenheit. If handled with care there need be no fire danger connected with its use. However, there is a publication of the U.S.Department of Agriculture, entitled "Safe Use of Kerosene and Gasoline around the Home", which gives a number of points to observe for home fire prevention.

Store kerosene outside the house in a plainly marked can or drum, says this bulletin, and fill your stove and lamps by daylight. If it is absolutely necessary to refill after dark, carry a flash light, not a lamp, candle, or matches to see by. Never fill a kerosene stove while it is burning. Don't locate the stove near curtains which might catch fire, or hang towels above it. Set it away from the wall, with a sheet of metal behind it, and an air space behind the metal sheet. Don't let the wicks or asbestos rings or burners remain dirty. Trim wicks so they have no frayed edges. An even flame does the best cooking with a minimum of soot and smell. Boil burners occasionally in soda lye or soap solution. Keep the drip pan clean and do not store anything in it.

Other safety measures will also be found in Farmers' Bulletin 1678-F, which may be obtained free from the U.S.Department of Agriculture.

